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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,571	05/23/2001	Glenn McGall	2719.2019-001	9482

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EXAMINER

BORIN, MICHAEL L

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 11/07/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/862,571

Applicant(s)
McGall et al

Examiner
Michael Borin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 1-42 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

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Part III DETAILED ACTION

Claims 1-42 are currently pending.

Restriction Requirement

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claim 3, drawn to first method of reducing non-specific binding of target molecule to oligonucleotides on a surface of a solid support, classified in class 436, subclass 6.
- II. Claim 4, drawn to second method of reducing non-specific binding of target molecule to oligonucleotides on a surface of a solid support, classified in class 436, subclass 6.
- III. Claim 5, drawn to third method of reducing non-specific binding of target molecule to oligonucleotides on a surface of a solid support, classified in class 436, subclass 6.

Claims 1,2,6-9,12 are linking claims for Groups I-III and will be considered together with one of these Groups if elected.

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Groups I-III are drawn to distinct methods as each method requires step(s) not required by other methods. Claim 5 does not require formation of designated regions with monomers having photolabile groups (required by claim 4). Conversely, claims 3,4 do not require an activated designated layer. Further, claim 3 does not require any involvement of chemically removable protecting groups.

- IV. Claims 10,11, drawn to fourth method of reducing non-specific binding of target molecule to oligonucleotides on a surface of a solid support, classified in class 436, subclass 6.

These claims are improperly dependent from claim 1; they are not further limiting as claim 1 does not recite, in part (b), formation of multiple phosphate groups (polyanion chain). Consequently, claims 10, 11 are grouped as a separate group which is distinct from Groups I-III as it requires said step of forming polyanion chain of phosphate units not required by Groups I-III.

- V. Claims 13,20-23,25,26,31-34, drawn to fifth method of reducing non-specific binding of target molecule to oligonucleotides on a surface of a solid support, classified in class 436, subclass 6.

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Group V is distinct from the Groups I-IV above as it addresses attaching of oligonucleotides to polyanion chain, whereas Groups I-IV are drawn to attaching polynucleotides to solid support.

VI. Claims 15-18,19, 27,28,35,36, drawn to sixth method of reducing non-specific binding of target molecule to oligonucleotides on a surface of a solid support, classified in class 436, subclass 6.

These claims are improperly dependent from the respective base claims; they are not further limiting as they are drawn to formation of polyanion chain on protected region (see claim 15, line 2), whereas step (a) of claim 13 is drawn to formation of polyanion chain on designated region (see claim 13, line 6). Consequently, claims 15-18,19 are grouped as a separate group which is distinct from Group V as it requires said step of forming polyanion chain of phosphate units not required by Group V. Further, Group VI is distinct from Groups I-IV for the reasons set forth for Group V.

VII. Claims 24,29,30,37,38 drawn to seventh method of reducing non-specific binding of target molecule to oligonucleotides on a surface of a solid support, classified in class 436, subclass 6.

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Group VII is distinct from Group V as it requires attaching polyanion chain onto protected region while attaching polynucleotides to designated region, whereas Group V requires attaching of oligonucleotides to polyanion chain attached to designated region.

VIII. Claims 39,40, drawn to a substrate.

Group VIII relates to methods of Groups I-VII as product and methods of use. The product of Group VIII can be used in other processes, such as a substrate surface for peptide synthesis.

IX. Claims 41, 42, drawn to method for screening a target molecule, classified in class 436, subclass 6.

Group IX is related to Groups I-VII as method of use and methods of making, respectively, wherein the methods have different method steps, different modes and different effects.

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Because these inventions are distinct for the reasons given above and require non-coextensive literature and patent searches, restriction for examination purposes as indicated is proper.

Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(h).

Species Requirement

Election of species should be required prior to a search on the merits in all applications containing both species claims and generic or Markush claims.(MPEP 808.01(a))

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Claims of the Groups are individually or dependently directed to a plurality of disclosed patentably distinct species of products or method steps that require a burdensome classification, and/or bibliographic, manual and computer search. Depending on the Group elected, the following election of species is hereby required for the initial search for examination on merits:

For step (b) of Groups I-III or Group V: elect species of protective group, such as photolabile or chemically-removable (see, e.g., claims 7,8 or 20,21);

For Groups I-III, step 2) of claim 6 and claim 9: select species of compounds from Formula I or Formula II.

For Groups IV, VI, select species of compounds of general formula III (see claims 11,16).

For step c) of Groups V or VII: select between step c) as being a removal of protecting group (i.e., as in claims 25,29), or replacing it with phosphate group (i.e. as in claims 31,37).

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record

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showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

To be complete, a response to the election of species requirement should include a proper election along with a listing of all claims readable thereon, including any claims subsequently added. MPEP 809.02(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Borin whose telephone number is (703) 305-4506. Dr. Borin can normally be reached between the hours of 8:30 A.M. to 5:00 P.M. EST Monday to Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Mr. Michael Woodward, can be reached at (703) 308-4028. The fax telephone number for this group is (703) 305-3014.

Any inquiry of a general nature or relating the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

MICHAEL BORIN, PH.D
PRIMARY EXAMINER

November 5, 2002

